

***FlyBy Math™* Alignment**
Arizona Mathematics Standard Articulated By Grade Level
Grade 5

Strand 1: Number Sense and Operations

Concept 2. Numerical Operations

Understand and apply numerical operations and their relationship to one another.

Standard	<i>FlyBy Math™</i> Activities
PO 2. Solve word problems using grade-level appropriate operations and numbers	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

Concept 3: Estimation.

Use estimation strategies reasonably and fluently.

Standard	<i>FlyBy Math™</i> Activities
PO 1. Solve grade-level appropriate problems using estimation.	--Predict outcomes and explain results of mathematical models and experiments.

Strand 2: Data Analysis, Probability, and Discrete Mathematics

Concept 1: Data Analysis (Statistics)

Understand and apply data collection, organization and representation to analyze and sort data.

Standard	<i>FlyBy Math™</i> Activities
PO 1. Formulate questions to collect data in contextual situations.	--Conduct a simulation of each airplane scenario
PO 2. Construct a double-bar graph, line plot, frequency table, or three-set Venn diagram with appropriate labels and title from organized data.	--Represent distance, rate, and time data using line plots, bar graphs, and line graphs.
PO 3. Interpret graphical representations and data displays including bar graphs (including double-bar), circle graphs, frequency tables, three-set Venn diagrams, and line graphs that display continuous data.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
PO 4. Answer questions based on graphical representations, and data displays including bar graphs (including double-bar), circle graphs, frequency tables, three-set Venn diagrams, and line graphs that display continuous data.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

PO 6. Formulate reasonable predictions from a given set of data.	--Predict outcomes and explain results of mathematical models and experiments.
PO 8. Solve contextual problems using graphs, charts, and tables.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

Strand 3: Patterns, Algebra, and Functions

Concept 4: Analysis of Change

Analyze change in a variable over time and in various contexts.

Standard	<i>FlyBy Math™</i> Activities
PO 1. Describe patterns of change: --constant rate (speed of movement of the hands on a clock), and --increasing or decreasing rate (rate of plant growth).	--Represent distance, speed, and time relationship for constant speed cases using linear equations and a Cartesian coordinate system. --Interpret the slope of a line in the context of a distance-rate-time problem.

Strand 4: Geometry and Measurement

Concept 3: Coordinate Geometry

Specify and describe spatial relationships using coordinate geometry and other representational systems.

Standard	<i>FlyBy Math™</i> Activities
PO 1. Graph points in the first quadrant on a grid using ordered pairs.	--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.